





































**PROTECTION FOR WATERJETTING
AND HIGH PRESSURE CLEANING**

ELITE OPERATOR - UP TO 3 000 BAR / 43 500 PSI

10/28 - UP TO 2 800 BAR / 40 000 PSI

PRO OPERATOR - UP TO 500 BAR / 7 500 PSI

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ACCESSORIES

WORKPLACE SAFETY SOLUTIONS

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YOU'RE SAFE WITH US

We're on a mission: To make sure that our customers come home to their family and loved ones, every day. This is our reason for being and what drives us to go to work each morning. We do it by improving people's safety and performance in extremely demanding work environments, like oil platforms, alongside roads, in ports and heavy industries.

It's no coincidence that we're the leading company in protective clothing and equipment. Every single product is born out of necessity, developed in close cooperation with our end users. Over the years, we have developed a culture

of continuous innovation, where methods, concepts, and products are developed and refined on an ongoing basis. We have evolved into an innovative business partner who, through impeccable service and expertise, makes personal protective equipment smarter and the world a little safer. Our motto is "Saving Lives". This is not only our duty, but it also makes us feel good. It would be difficult to find anything more meaningful to spend our time doing.

We are Smooth, Ambitious, Futuristic, Energetic.
In short: We are S.A.F.E. So are you.



PPE FOR HANDHELD WATERJETTING

ELITE OPERATOR



2000 BAR / 30000 PSI



3000 BAR / 43500 PSI



PPE FOR HANDHELD WATERJETTING

10/28



1000 BAR / 15000 PSI



2800 BAR / 40000 PSI



PPE FOR HIGH PRESSURE CLEANING

PRO OPERATOR



200 BAR /
3000 PSI



500 BAR /
7500 PSI



500 BAR /
7500 PSI



PROTECTION FOR WORKPLACES

WORKPLACE SAFETY SOLUTIONS



3000 BAR / 43500 PSI



1400 BAR / 20300 PSI

SAFETY AND TECHNICAL INFO



PEPPER HORN AND HELD WATERJETTING

**NEW
PRODUCT
SERIES!**

ELITEOPERATOR

2000 BAR / 30000 PSI

3000 BAR / 43500 PSI

Our protective clothing for waterjetting has the highest mobility and compliance in the industry. However, thanks to a close collaboration with our end users, we knew that they wished for even more mobility and comfort. We always listen to our customers. But how could we satisfy these needs without compromising the protection level?

Our R&D took on the challenge. They began to investigate and research, then moved on to drawing, cutting, and sewing. And then we tested the innovations and tested some more, until we had something extraordinary. We call it Athletic Design and it has enabled us to develop a brand new product series: EliteOperator!



MAXIMIZE THE FREEDOM OF MOVEMENT

Our new product series EliteOperator with Athletic Design is quite simply a revolution for the mobility and compliance of protective clothing at this level of protection. The Athletic Design makes it easier to walk, bend down, crouch, bend arms, bend legs, squat, climb ladders, walk stairs and everything else an operator does during a work shift. The difference is so remarkable that you must try the new products to believe it!

The revolutionary Athletic Design can be found on parts both with and without a protective surface. The protective surface

is now more compliant in all directions. Parts that do not have a protective surface has got a new fabric that is elastic, which fits and follows the body's movement considerably better. In addition, the fabric is softer than the previous one. We have also moved and changed seams, which improves the balance of the clothing, so that they fit and follow the body's movement better.

Overall, the difference is incredible. And we can't wait to get the reactions from users all over the world and hear what it means for their working day.

THE FABRICS

TECHSTEEL™

Outer shell in all protective areas. Water repellent and very high-resistant against abrasion and tearing, over 500 000 Martindale.

STRETCH

On areas without protection, for increased mobility and comfort.

DYNEEMA®

The protective fabric inside the clothing is made of the strongest fiber in the world, 15 times stronger than steel.

ARA-SHIELD®

Extra reinforcement on exposed surfaces, such as knees and leg ends.

THE DESIGN

A WEDGE THAT MAKES A DIFFERENCE

It's all in the details. A wedge-shaped part in the armpit area provides increased mobility.

PRE-BENT KNEES

Pre-bent knees add flexibility to our Trousers and Overalls. Neoprene fabric closest to the knee offers a soft, lightly padded feel.

NEW DESIGN IN THE GROIN

The protective area with Dyneema® is divided into several parts, which increases mobility.

A REVOLUTION ON THE INSIDE

The biggest change is not visible on the outside, but you will feel it! The protective areas with Dyneema® has been upgraded and now follow the body's movements which provides increased mobility, and a more comfortable workday.

 SINGLE 2000 BAR / 30000 PSI  ROTOR 3000 BAR / 43500 PSI

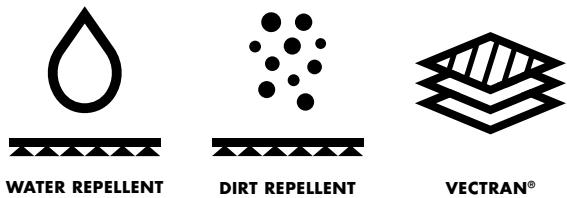
AREAS WITH PROTECTION

It is essential that the operator knows where and for what the clothes protect. Glossy fabric clearly identifies protective areas, and the label tells the level of protection. Orange labels indicate protection for 2 000 bar/30 000 psi single jet and 3 000 bar/43 500 psi rotor jet – 20/30. See test tables on page 75.



KEEP DRY AND LIGHT

The outer fabric in Techsteel™ is both dirt and water repellent, which keeps the operator dry and light all day long. Techsteel™ has a very high resistancy against abrasion and tearing, over 500 000 Martindale. The outer material is furthermore reinforced with Vectran® (LCP) for maximum strength and durability. The request for these qualities comes originally from the industry of concrete removal and demolition.



FIVE LAYERS FOR OPTIMAL PERFORMANCE

TECHSTEEL™
Dirt and water repellent.
Durability: > 500 000 Martindale.

DYNEEMA®
The world's strongest fiber in protective areas.

MESH LINING
Ventilating and stretchy.

THE WORLD'S STRONGEST FIBER HAS GOT YOU COVERED

In protective areas of the clothing, we use an ultra strong and ultra light fiber – Dyneema®. The fiber is 15 times stronger than steel and up to 40 % stronger than aramids. This enables us to develop protective clothing which are lighter and more comfortable, without compromising on safety and durability.



KEEP YOUR COOL IN ANY SITUATION

Do you work with waterjetting in warm environments? If so, we have two cool features for you: The first is ventilated protective clothing, an option available in our Trousers and Overalls. The solution allows compressed air to flow through the clothing, cooling you during the entire work shift. If compressed air is not an option for you, then our Cooling Vest is a good alternative. The vest absorbs heat from the body and provides an effective, but gentle cooling.

Read more on page 81.



WE KEEP YOU SAFE FROM HEAD TO TOE

HEAD PROTECTION 3000 BAR

See p. 19

JACKET

See p. 13

**HOSE
PROTECTION**

See p. 23

GLOVES 500 BAR

See p. 28

TROUSERS

See p. 13

GAITERS

See p. 22



THE BEST PROTECTION
ON THE MARKET



GAMMA KIT

BEST
SELLER

- JACKET
- TROUSERS

- Increased mobility and comfort thanks to flexible protective material, new design, stretch fabric and pre-bent knees on the trousers.
- Full front protection as well as round the neck, shoulders, and the entire area round the forearm.
- Ventilation is an option. *Read more on page 81.*
- A great choice for jobs that require movement.
- Add Head Protection, Protective Gloves and Boots or Gaiters and you are protected from head to toe.
- **CE** Regulation (EU) 2016/425

STRIPED AREAS ARE PROTECTED

SINGLE 2000 BAR / 30000 PSI ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
S/M-4XL/5XL	5.2 kg (SIZE L/XL)	51K3068 5075

SIGMA KIT

- VEST
- OVERALL

- Increased mobility in the Overall thanks to pre-bent knees and flexible protective material as well as stretch material in the back. Vest in new design with more flexible protective material increases mobility and protection.
- The Overall protects the lower body, the Vest the upper body.
- Ventilation is an option. *Read more on page 81.*
- A good choice if you move, climb or crawl a lot.
- Add Head Protection, Protective Gloves and Boots or Gaiters for a head to toe coverage.
- **CE** Regulation (EU) 2016/425

STRIPED AREAS ARE PROTECTED

SINGLE 2000 BAR / 30000 PSI ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
S-3XL	5.2 kg (SIZE L)	51K2068 5075

DELTA KIT

- VEST
- HAND PROTECTIONS
- TROUSERS

- Increased mobility and comfort thanks to flexible protective material, new design, stretch fabric and pre-bent knees on the trousers.
- Compliant and comfortable.
- Ventilation is an option. *Read more on page 81.*
- A great choice in warm environments.
- Add Head Protection, Protective Gloves and Boots or Gaiters for a head to toe coverage.
- **CE** Regulation (EU) 2016/425

STRIPED AREAS ARE PROTECTED

SINGLE 2000 BAR / 30000 PSI ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
S/M-2XL/3XL	4.9 kg (SIZE L/XL)	51K1068 5075

ALFA KIT

- VEST WITH APRON
- HAND PROTECTIONS

- Vest with Apron in a new design with more flexible protective material increases mobility and protection.
- Protection over the shoulders and all the way down.
- Easy to switch between users, e.g. if used by several operators.
- A great choice for stationary work and in warm environments.
- Add Head Protection, Protective Gloves and Boots or Gaiters for a head to toe coverage.
- **CE** Regulation (EU) 2016/425

STRIPED AREAS ARE PROTECTED

SINGLE 2000 BAR / 30000 PSI ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
XXS/XS, L/XL, 2XL/3XL	3.5 kg (SIZE L/XL)	51K4068 5075



JACKET

- Increased mobility and comfort thanks to flexible protective material, stretch fabric and new design.
- Adjusted fit for increased comfort. Extended protective area on the torso and on the side.
- Full front protection as well as round the neck, shoulders and the entire area round the forearm.
- Fastening at the back for full protection in the front.
- A comfortable neoprene cuff inside the arm prevents water leakage.
- Part of the Gamma Kit.
- **CE** Regulation (EU) 2016/425



SIZES	WEIGHT	ART. NO.
S/M-4XL/5XL	2.5 kg (SIZE L/XL)	5122068 5075

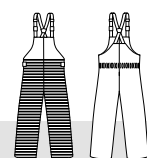


TROUSERS

- Increased mobility thanks to pre-bent knees and flexible protective material as well as stretch material in the back.
- Adjusted fit for increased comfort.
- Full front protection up to the waist.
- Extra high wear resistance on the knees and at the bottom of the trousers. Knee pockets for knee pads.
- Adjustable suspenders, elastic rear waist and a belt helps distribute weight and improves the comfort.
- Ventilation is an option. *Read more on page 81.*
- Part of the Gamma Kit and Delta Kit.
- **CE** Regulation (EU) 2016/425



SIZES	WEIGHT	ART. NO.
S/M-4XL/5XL	2.7 kg (SIZE L/XL)	5132068 5075



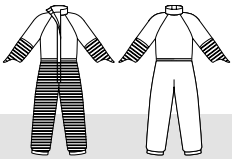
The new Athletic Design is a revolution for the mobility and comfort in the UHP protective clothing segment.



OVERALL



- Increased mobility thanks to pre-bent knees and flexible protective material as well as stretch material in the back.
- New design with openable legs from the knees down.
- Protection on the whole front of the legs up to the waist, and round the forearm. Note: No protection on the upper body. Must be worn together with Vest.
- The neoprene collar seals well round the neck while maintaining freedom of movement.
- The Overall stays in place, whether the operator is climbing on ladders or working in narrow spaces.
- Ventilation is an option. *Read more on page 81.*
- Part of the Sigma Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

 SINGLE 2000 BAR / 30000 PSI  ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
S-3XL	3.5 kg (SIZE L)	5144068 5075

VEST

- Improved fit and protection surface thanks to expanded size range.
- New design with more flexible protective material increases mobility and protection.
- Effective protection and optimal comfort.
- Part of the Sigma Kit and Delta Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

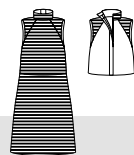
 SINGLE 2000 BAR / 30000 PSI  ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
S/M-2XL/3XL	1.7 kg (SIZE L/XL)	5120068 5075



VEST WITH APRON

- Improved fit and protection surface thanks to expanded size range.
- New design with more flexible protective material increases mobility and protection.
- Superior freedom of movement and comfort, yet effective protection for the whole front of the body.
- Vest on top helps spreading the weight of the garment.
- Easy adjusting for different operators and purposes.
- Part of the Alfa Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

 SINGLE 2000 BAR / 30000 PSI  ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
XXS/XS, L/XL, 2XL/3XL	3.0 kg (SIZE L/XL)	5123568 5075

APRON

- Protection on the whole area of the Apron.
- Adjustable shoulder band for comfort and easy donning.
- Very easy to put on and take off. Can easily be used by multiple operators.
- Can be upfolded and fastened for easier work in stairs and on ladders.
- Often used in combination with Hand Protections and Gaiters or Boots 3 000.
- **CE** Regulation (EU) 2016/425



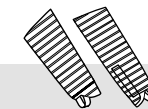
STRIPED AREAS ARE PROTECTED

 SINGLE 2000 BAR / 30000 PSI  ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
ONE SIZE	1.5 kg	5123068 5075

HAND PROTECTIONS

- Protects the entire area round the forearm and the back of the hand.
- Easy to put on and is kept in place with a thumb strap.
- Easy adjusting for different arms and clothing.
- Specific right and left hand designs. Sold in pairs.
- Part of Alfa and Sigma Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

 SINGLE 2000 BAR / 30000 PSI  ROTOR 3000 BAR / 43500 PSI

SIZES	WEIGHT	ART. NO.
ONE SIZE	0.5 kg	5100068 5075





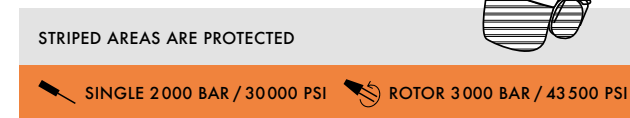
The Head Protection 3000 bar is comfortable and easy to adjust to your preferences.

HEAD PROTECTION 3000 BAR

- A comfortable Helmet with a Visor and Hearing Protectors.
- All parts are tested and certified up to 3 000 bar/43 500 psi. The only Head Protection on the market that is tested and certified.
- Hook strap that prevents the helmet from falling off in the event of an accident.
- Hearing Protectors reduce the noise level by up to 33 dB (SNR 32 dB classified).
- Adjustable for optimal protection and fit. 3-point chin strap is included.

CE-marking, approved according to:

- **CE** Regulation (EU) 2016/425
- Industrial safety helmets: EN397:2012
- Eye protection: EN166:2001
- Hearing Protection: EN 352-3:2002



SIZES	ART. NO.
ONE SIZE (53–62 cm)	5102068 5000



NECK PROTECTION

- Excellent complement to the Head Protection 3000 bar.
- Protects the sensitive areas between the Head Protection 3000 bar and the Jacket/Vest.
- Attaches to the rear of Head Protection 3000 bar. Closes with hooks & loops in front of the face.
- Can be worn in or outside the visor.
- Ventilation is recommended.
- **CE** Regulation (EU) 2016/425



SIZES	WEIGHT	ART. NO.
ONE SIZE	0.3 kg	5110568 5075



PARTS THAT CAN BE ORDERED SEPARATELY

HELMET



ART. NO.

5102168 5000

HEARING PROTECTORS



ART. NO.

5105168 5000

VISOR HOLDER



ART. NO.

5103168 5000

VISOR - PACK OF 10



ART. NO.

5104168 5000

CHIN STRAP



ART. NO.

5102190 5000

HELMET SUSPENSION



ART. NO.

5102490 5000



GAITERS

- To be worn on the outside of regular protective boots.
- The entire area around the leg and the foot is protected.
- Very comfortable and light to wear.
- Easy to adjust for a perfect fit.
- Specific right and left foot designs. Sold in pairs.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

SINGLE 2000 BAR / 30 000 PSI ROTOR 3000 BAR / 43 500 PSI

SIZES	WEIGHT	ART. NO.
EUR 36–41, 42–48, 49–52	1.4 kg	5158068 5075

See shoe size conversion table on page 79



BOOTS 3000 BAR

- Withstands “everything” within waterjetting on account of its fixed aluminium gaiters.
- The gaiters are moulded and jointed, providing excellent comfort and mobility.
- Chem resistant anti-penetration sole.
- Sensitive to small stones and not suitable for uneven ground. For that we recommend the Gaiters.
- **CE** Regulation (EU) 2016/425
- Safety footwear: ISO 20345:2011

See test results on p. 75.



STRIPED AREAS ARE PROTECTED

SINGLE 2000 BAR / 30 000 PSI ROTOR 3000 BAR / 43 500 PSI

SIZES	WEIGHT	ART. NO.
EUR 42–48	1.9 kg each (SIZE 42)	5052080 5000

See shoe size conversion table on page 79



HOSE PROTECTION

The greatest risk areas of a hose break are near or on the waterjet gun; areas often very close to the operator and near sensitive areas of the body, such as the abdomen, the arm pit or the neck. These are difficult areas to properly protect. The Hose Protection, placed on the hose at the connection to the lance, protects the operator if a coupling or a hose breaks or if a pinhole leak occurs. In many countries, the use of hose protection is mandatory. And in some countries a whip stop is also required.

Check the rules and regulations in your region. We recommend at least 1 400 mm. With this length, the operator has the best possible protection of the body. Also, the Hose Protection lies on the ground which means the operator doesn't have to carry the weight.

SOLID STEEL COLLAR



Closest to the lance, where the hose is most likely to break, there is a 250 mm solid steel collar, which effectively protects the operator in the event of an accident.

SWIVEL



Our best seller is the 1 400 mm length with swivel. The swivel rotates freely around the steel collar and follows the operator's movement, which makes work easier and more ergonomic. Operators experience less strain on the body, and we highly recommend using the swivel.



The difference between "water leak?" and "aaargh!"

- Three different lengths, three different diameters. We also offer tailor-made Hose Protections. If you have special requirements, feel free to ask.
- An adjustable strap holds the Hose Protection to the lance.
- Tested for 3 000 bar / 43 500 psi. *See test results on p. 75.*
- Swivel for optimal function combined with a swiveling hose connection is recommended.
- Metal ring at the bottom, a wear and tear protection for when the hose is on the ground.

HOSE PROTECTION Ø 36 MM

LENGTH		ART. NO.	MOD. NO.
750 mm	2.5 ft	5060040	5920
1400 mm	4.6 ft	5060040	5940
1800 mm	6.0 ft	5060040	5960

HOSE PROTECTION Ø 47 MM SWIVEL

LENGTH		ART. NO.	MOD. NO.
1400 mm	4.6 ft	5060050	5942

HOSE PROTECTION Ø 59 MM

LENGTH		ART. NO.	MOD. NO.
750 mm	2.5 ft	5060060	5920
1400 mm	4.6 ft	5060060	5940
1800 mm	6.0 ft	5060060	5960

**BEST
SELLER**



HOSE CONNECTION COVER

The Hose Connection Cover protects people working near, or passing by, foot pedals and pumps. Is to be used where hoses have couplings and connections. Does not replace a Hose Protection near the body, when using a waterjet gun.

- An adjustable strap holds the Connection Cover securely in place.
- Loops to further fasten and assemble several covers.
- Tested for hose bursts at 3 000 bar/43 500 psi, but not for pinhole leaks.

See test results on p. 75.

Ø 61 MM / 2.4 IN					
LENGTH		WEIGHT		ART. NO.	MOD. NO
400 mm	1 ft 4 in	0.4 kg	0.9 lbs	5071000	5910
5 m	16 ft 5 in	3.8 kg	8.4 lbs	5071000	5978



WHIP STOP

For securing hose ends at foot pedals, pumps or connections. Catches the broken hose and prevents it from whipping. Mounted by slipping it over the hose ends, stretching it and finally tightening the ends, securing with the rubber lock rings.

- Made in strong polyester. Easy to carry, easy to clean.
- Tensile strength 30 kN/3 tons.
- Width approx 25 mm/1 in.
- Minimum order 50 pcs.
- Produced and tested in accordance with EN 12195-2.

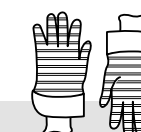
TENSILE STRENGTH	LENGTH		ART. NO.
30 000 N	APPROX. 75 cm	APPROX. 2.5 ft	5072000 5000






GLOVES 500 BAR

- Waterproof Gloves with protection up to 500 bar/7 500 psi.
- The material and the rough, sand patterned surface provides the best possible grip. Outside is dipped in nitrile rubber.
- Separate inner gloves in nylon for optimal comfort and washability.
- Tested and classified with the highest test values: The level of performance is 4 out of 4 in abrasion, tear and puncture resistance, and level 5 out of 5 in blade cut resistance.
- Learn more on p. 61.
- Supplied in 12-pack. Shelf life up to 3 years.
- **CE** Regulation (EU) 2016/425
- Protective Gloves: EN ISO 388:2016

See test results on p. 75.



STRIPED AREAS ARE PROTECTED

 SINGLE 200 BAR / 3 000 PSI  ROTOR 500 BAR / 7 500 PSI  FLAT 500 BAR / 7 500 PSI

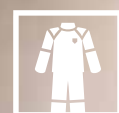
SIZES	ART. NO.
9, 11	5600025 5000



BALACLAVA

- Designed to keep the body dry.
- To be worn on the outside of the clothing.
- The breast bib is made of Cordura and is fitted with adjustable straps to hold it in place.
- **No protection against water jets (made of neoprene).**

SIZES	ART. NO.
ONE SIZE	5010000 5000



PPE FOR HANDHELD WATERJETTING

10/28



1 000 BAR / 15 000 PSI



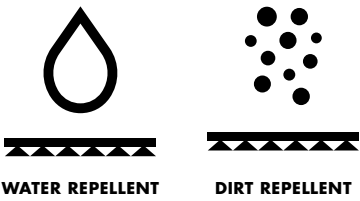
2 800 BAR / 40 000 PSI

With protection up to 1 000 bar single jet and 2 800 bar rotor jet, our 10/28 range is the perfect choice not only for handheld, but also for robotic and automatic

waterjetting. Strong yet comfortable, the 10/28 range offers protection for all parts of the body.

KEEP DRY AND LIGHT

The outer material has a DWR (Durable Water Repellent) treatment. This keeps the operator dryer and lighter, and makes the clothes easy to clean.



THE WORLD’S STRONGEST FIBER PROTECTS YOU

In protective areas of the clothing, we use an ultra strong and ultra light fiber – Dyneema®. The fiber is 15 times stronger than steel and up to 40 % stronger than aramids. This enables us to develop protective clothing which are lighter and more comfortable, without compromising on safety and durability.



AREAS WITH PROTECTION

It is essential that the operator knows where and for what the clothes protect. Striped fabric clearly identifies protective areas, and the label tells the level of protection. Yellow label indicates protection for 1 000 bar/15 000 psi single jet and 2 800 bar/40 000 psi rotor jet. See test tables on page 75.



FIVE LAYERS FOR OPTIMAL PERFORMANCE

POLYAMIDE

Dirt and water repellent.
Durability: 300 000 Martindale.

DYNEEMA®

The world’s strongest fiber in protective areas.

MESH LINING

Ventilating and stretchy.



KEEP YOUR COOL IN ANY SITUATION

Do you work with waterjetting in warm environments? If so, we have two cool features for you: The first is ventilated protective clothing, an option available in our Trousers and Overalls. The solution allows compressed air to flow through the clothing, cooling you during the entire work shift. If compressed air is not an option for you, then our Cooling Vest is a good alternative. The vest absorbs heat from the body and provides an effective, but gentle cooling.

Read more on page 81.



PROTECTION FROM HEAD TO TOE

HEAD PROTECTION 3000 BAR

See p. 19

JACKET

See p. 37

**HOSE
PROTECTION**

See p. 23

GLOVES 500 BAR

See p. 28

TROUSERS

See p. 37

BOOTS 3000 BAR

See p. 22

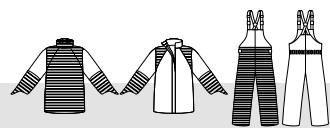


GAMMA KIT

BEST
SELLER

- JACKET
- TROUSERS

- Full front protection as well as round the neck, shoulders, and the entire area round the forearm.
- Ventilation is an option. *Read more on page 81.*
- A great choice for jobs that require movement.
- Add Head Protection, Protective Gloves and Boots or Gaiters and you are protected from head to toe.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

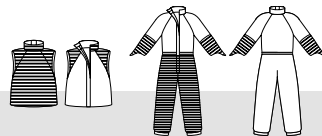
SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
S/M-4XL/5XL	4.3 kg (SIZE L/XL)	51K3047 5000

SIGMA KIT

- VEST
- OVERALL

- The Overall protects the lower body, the Vest the upper body.
- Ventilation is an option. *Read more on page 81.*
- A good choice if you move, climb or crawl a lot.
- Add Head Protection, Protective Gloves and Boots or Gaiters for a head to toe coverage.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

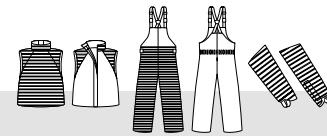
SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
S-3XL	4.3 kg (SIZE L)	51K2047 5000

DELTA KIT

- VEST
- HAND PROTECTIONS
- TROUSERS

- Compliant and comfortable.
- Ventilation is an option. *Read more on page 81.*
- A great choice in warm environments.
- Add Head Protection, Protective Gloves and Boots or Gaiters for a head to toe coverage.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

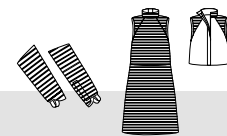
SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
S/M-2XL/3XL	4.7 kg (SIZE L/XL)	51K1047 5000

ALFA KIT

- VEST WITH APRON
- HAND PROTECTIONS

- Protection over the shoulders and all the way down.
- Easy to switch between several operators.
- A great choice for stationary work and in warm environments.
- Add Head Protection, Protective Gloves and Boots or Gaiters for a head to toe coverage.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
ONE SIZE	3.4 kg	51K4047 5000



JACKET

- Full front protection as well as round the neck, shoulders and the entire area round the forearm.
- Fastening at the back to get the full protection in the front.
- A comfortable neoprene cuff inside the arm prevents water leakage.
- Part of the Gamma Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

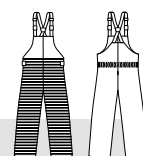
🔪 SINGLE 1 000 BAR / 15 000 PSI 🌀 ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
S/M-4XL/5XL	2 kg (SIZE L/XL)	5122047 5080



TROUSERS

- Full front protection up to the waist.
- Very popular among workers who move a lot, climb or crawl.
- Extra high wear resistance on the knees and at the bottom of the trousers. Knee pockets if you want to add knee pads.
- Wide, adjustable braces in stretch material. Elastic part in the rear waist and a belt which helps to distribute weight and improves the comfort.
- For work in warm environments, Trousers can be ordered with ventilation. *Read more on p. 81.*
- Part of the Gamma Kit and Delta Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

🔪 SINGLE 1 000 BAR / 15 000 PSI 🌀 ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
S/M-4XL/5XL	2.3 kg (SIZE L/XL)	5132047 5000

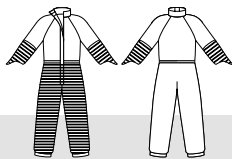






OVERALL



- Protection on the whole front of the legs up to the waist, on the forearms and the entire area round the arm.
Note: No protection on the upper body. Must be worn together with Vest.
- The neoprene collar seals well round the neck while maintaining freedom of movement.
- The Overall is always in place, no matter if the operator is climbing on ladders or working in narrow spaces.
- Ventilation is an option. *Read more on p. 81.*
- Part of the Sigma Kit.
- **CE** Regulation (EU) 2016/425



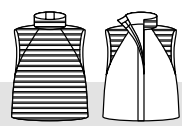
STRIPED AREAS ARE PROTECTED

 SINGLE 1 000 BAR / 15 000 PSI  ROTOR 2 800 BAR / 40 000 PSI



SIZES	WEIGHT	ART. NO.
S-3XL	3.0 kg (SIZE L)	5144047 5080

VEST

- Effective protection and optimal comfort.
- Part of the Sigma Kit and Delta Kit.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

 SINGLE 1 000 BAR / 15 000 PSI  ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
M/2XL, 3XL	1.3 kg (SIZE M/2XL)	5120047 5000

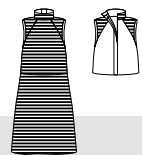
Overall with Hand Protections and Vest protects the whole front of the body. Especially appreciated in cold and windy places.



The Apron is easy to put on and take off. Great for shorter jobs and demonstrations.

VEST WITH APRON

- Superior freedom of movement and comfort, yet effective protection for the whole front of the body.
- Vest on top helps spreading the weight of the protective garment.
- Easy adjusting for different operators and purposes.
- Part of the Alfa Kit.
- **CE** Regulation (EU) 2016/425



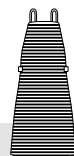
STRIPED AREAS ARE PROTECTED

SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
ONE SIZE	2.8 kg	5123547 5000

APRON

- Protection on the whole area of the Apron.
- Adjustable shoulder band for good comfort and easy donning.
- Very easy to put on and take off. Can easily be used by multiple operators.
- Can be upfolded and fastened for easier work in stairs and on ladders.
- Often used in combination with Hand Protections and Gaiters or Boots 3000.
- **CE** Regulation (EU) 2016/425



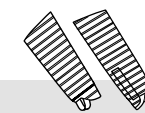
STRIPED AREAS ARE PROTECTED

SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
ONE SIZE	1.4 kg	5123047 5000

HAND PROTECTIONS

- Protects the entire area round the forearm and the back of the hand.
- Easy to put on and a thumb strap keeps it in place.
- Easy adjusting for different arms and clothing.
- Specific right and left hand designs. Sold in pair.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

SINGLE 1 000 BAR / 15 000 PSI ROTOR 2 800 BAR / 40 000 PSI

SIZES	WEIGHT	ART. NO.
ONE SIZE	0.6 kg	5100047 5000





PPE FOR HIGH PRESSURE CLEANING

PROOPERATOR



200 BAR / 3 000 PSI



500 BAR / 7 500 PSI



500 BAR / 7 500 PSI

We develop and manufacture our clothing in Borås, the capital of textiles as well as the rainiest city in Sweden. The location is absolutely perfect when designing waterproof workwear for demanding

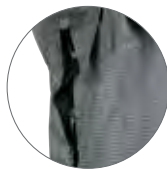
workplaces. Our ProOperator range protects the operator during high pressure cleaning up to 500 bar/ 7 500 psi. Due to the light, but strong materials, our clothes are comfortable to wear all day long.

IT'S ALL IN THE DETAILS

Thoughtful details are often the difference between good and excellent. We know that from working closely with the end users.



Reinforcements on the knees / pockets for knee pads.



Openable ventilation in the armpits.



Pocket for ID card on the right sleeve.



Detachable hood with three adjustment possibilities and room for head protection.



Waterproof zippers with overlapping flaps.

THE WORLD'S STRONGEST FIBER PROTECTS YOU

We use an ultra strong and ultra light fiber – Dyneema®. The fiber is 15 times stronger than steel and up to 40 % stronger than aramids. This enables us to develop protective clothing which are lighter and more comfortable, without compromising on safety and durability.



DYNEEMA®

AREAS WITH PROTECTION

It is essential that the operator knows where and for what the clothes protect. Striped fabric clearly identifies protective areas, and the label tells the level of protection. *See test tables on page 75.*

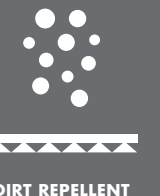


BE WATERPROOF

The outer material has a DWR (Durable Water Repellent) treatment. This keeps the operator dryer and lighter, and makes the clothes easy to clean. All ProOperator clothes have waterproof zippers and/or overlapping flaps.



WATER REPELLENT



DIRT REPELLENT

THREE DIFFERENT LAYERS WORKING TOGETHER

POLYAMIDE

Dirt and water repellent.
Durability: 300 000 Martindale.

DYNEEMA®

The world's strongest fiber in protective areas.

MESH AND POLYESTER LINING

Ventilating and stretchy.

DON'T BLEND IN. STAND OUT.

Did you know that most of our ProOperator products also comes in a high visibility version? The functionality and comfort are exactly the same as the standard ProOperator (protection during high pressure cleaning up to 500 bar / 7 500 psi). Instead of our gray fabric, we use a Hi-Vis orange fabric with added reflective material. It provides extra safety in workplaces where it is important or required to be highly visible.



HEAD PROTECTION 3000 BAR

See p. 60

GLOVES 500 BAR

See p. 61

HOSE PROTECTION

See p. 64

JACKET

See p. 49

TROUSERS

See p. 49

BOOTS 500 BAR

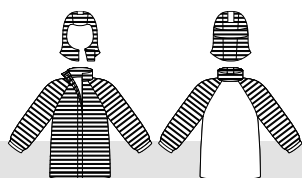
See p. 64

**WE KEEP EVERY
PART OF THE BODY
SAFE AND SOUND**



JACKET

- Protection on the entire front, arms and hood.
- Very smooth and flexible to wear. Lined for high comfort. Waist adjustable with drawstrings.
- Thoughtful details such as openable ventilation in the armpits, comfortable cuffs, and adjustable spacious hood.
- Waterproof zipper with overlapping flap.
- Two outer pockets with waterproof zippers. Pocket for ID card on right sleeve. Two inner pockets with zippers.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

SINGLE 200 BAR / 3 000 PSI
 ROTOR 500 BAR / 7 500 PSI
 FLAT 500 BAR / 7 500 PSI

SIZES	WEIGHT	ART. NO.
XS-3XL	1.6 kg (SIZE L)	5622025 5000



TROUSERS

- Protection on the whole front.
- Detachable braces (included) and adjustable elastic waist for perfect fit. Dual loops for belt.
- Two outer pockets with waterproof zippers. Pocket for knife and pocket with waterproof zipper on leg.
- Waterproof zippers at the bottom of the legs allow the trousers to widen to facilitate donning the boots. Waterproof zipper in fly with overlapping flap.
- Reinforcements on the knees and pockets for knee pads.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED

SINGLE 200 BAR / 3 000 PSI
 ROTOR 500 BAR / 7 500 PSI
 FLAT 500 BAR / 7 500 PSI

SIZES	WEIGHT	ART. NO.
XS-3XL	1.3 kg (SIZE L)	5632025 5000



PROOPERATOR

ProOperator is available in both grey and Hi Vis.



EN ISO 20471

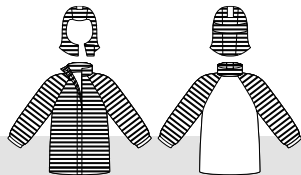


EN ISO 20471



JACKET

- Protection on the entire front, arms and hood.
- Very smooth and flexible to wear. Lined for high comfort. Waist adjustable with drawstrings.
- Thoughtful details such as openable ventilation in the armpits, comfortable cuffs, and adjustable spacious hood.
- Waterproof zipper with overlapping flap.
- Two outer pockets with waterproof zippers. Pocket for ID card on right sleeve. Two inner pockets with zippers.
- **CE** Regulation (EU) 2016/425
- High visibility clothing: EN ISO 20471



STRIPED AREAS ARE PROTECTED

 SINGLE 200 BAR / 3 000 PSI  ROTOR 500 BAR / 7 500 PSI  FLAT 500 BAR / 7 500 PSI

SIZES	WEIGHT	ART. NO.
XS-3XL	1.6 kg (SIZE L)	5622025 5690

TROUSERS

- Protection on the whole front.
- Detachable braces (included) and an adjustable elastic waist for perfect fit. Dual loops for belt.
- Two outer pockets with waterproof zippers. Pocket for knife and pocket with waterproof zipper on leg.
- Waterproof zippers at the bottom of the legs allow the trousers to widen to facilitate donning the boots. Waterproof zipper in fly with overlapping flap.
- Reinforcements on the knees and pockets for knee pads.
- **CE** Regulation (EU) 2016/425
- High visibility clothing: EN ISO 20471. Worn together with jacket; class 3 high visibility.



STRIPED AREAS ARE PROTECTED

 SINGLE 200 BAR / 3 000 PSI  ROTOR 500 BAR / 7 500 PSI  FLAT 500 BAR / 7 500 PSI

SIZES	WEIGHT	ART. NO.
XS-3XL	1.3 kg (SIZE L)	5632025 5690



VEST

- Comfortable vest with protection on both the front and the back.
- Good for warm environments.
- Waterproof zipper with overlapping flap.
- Two pockets with waterproof zippers. Pocket for ID card.
- Worn together with trousers; class 3 high visibility.
- CE Regulation (EU) 2016/425
- High visibility clothing: EN ISO 20471

STRIPED AREAS ARE PROTECTED

SINGLE
200 BAR / 3 000 PSI

ROTOR
500 BAR / 7 500 PSI

FLAT
500 BAR / 7 500 PSI

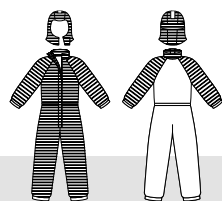
SIZES	WEIGHT	ART. NO.
S-3XL	1 kg (SIZE L)	5620025 5690





OVERALL

- Protection on the entire front, arms and hood.
- Lined for high comfort. Elastic back waist, openable ventilation in the armpits, waterproof cuffs, adjustable hood.
- Outer pockets w. waterproof zippers. ID card pocket on right sleeve. Knife pocket, pocket w. waterproof zipper on leg etc.
- Waterproof zipper with overlapping flap. Waterproof zippers at the bottom of the legs.
- Reinforcements on the knees and pockets for knee pads.
- **CE** Regulation (EU) 2016/425



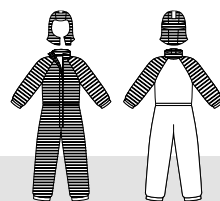
STRIPED AREAS ARE PROTECTED

SINGLE 200 BAR / 3 000 PSI
 ROTOR 500 BAR / 7 500 PSI
 FLAT 500 BAR / 7 500 PSI

SIZES	WEIGHT	ART. NO.
XS-3XL	2.5 kg (SIZE L)	5640025 5000

OVERALL

- Protection on the entire front, arms and hood.
- Lined for high comfort. Elastic back waist, openable ventilation in the armpits, waterproof cuffs, adjustable hood.
- Outer pockets w. waterproof zippers. ID card pocket on right sleeve. Knife pocket, pocket w. waterproof zipper on leg etc.
- Waterproof zipper with overlapping flap. Waterproof zippers at the bottom of the legs.
- Reinforcements on the knees and pockets for knee pads.
- **CE** Regulation (EU) 2016/425
- High visibility clothing: EN ISO 20471



STRIPED AREAS ARE PROTECTED

SINGLE 200 BAR / 3 000 PSI
 ROTOR 500 BAR / 7 500 PSI
 FLAT 500 BAR / 7 500 PSI

SIZES	WEIGHT	ART. NO.
XS-3XL	2.6 kg (SIZE L)	5640025 5690



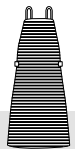


Did you know that Borås receives about one meter of rain each year? That's more than in any other city in Sweden.
A perfect place for creating protective clothing for high pressure cleaning!



APRON

- Protection on the entire area of the Apron.
- Great in warm environments.
- Adjustable shoulder bands for added comfort and easy donning.
- Easy to put on and take off.
- **CE** Regulation (EU) 2016/425

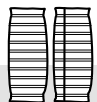


STRIPED AREAS ARE PROTECTED		
SINGLE 200 BAR / 3 000 PSI	ROTOR 500 BAR / 7 500 PSI	FLAT 500 BAR / 7 500 PSI
SIZES	WEIGHT	ART. NO.
ONE SIZE	0.8 kg	5623025 5000



ARM PROTECTIONS

- Built-in protection all the way round the arm, from the wrist to the upper arm.
- Elastic cuffs in both ends for easy donning and good fit.
- Developed and recommended for personnel working at test rigs for hydraulics. *See test tables on page 77.*
- Sold in pairs.
- **CE** Regulation (EU) 2016/425



STRIPED AREAS ARE PROTECTED			
SINGLE 200 BAR / 3 000 PSI	ROTOR 500 BAR / 7 500 PSI	FLAT 500 BAR / 7 500 PSI	
SIZES	LENGTH	WEIGHT	ART. NO.
XS/M, L/2XL	XS/M: 40 cm L/2XL 50 cm	0.35 kg	5602025 5000



HEAD PROTECTION 3000 BAR

- A comfortable Helmet with a Visor and Hearing Protectors.
- All parts are tested and certified up to 3 000 bar/43 500 psi. The only Head Protection on the market that is tested and certified.
- Hook strap that prevents the helmet from falling off in the event of an accident.
- Hearing Protectors reduce the noise level by up to 33 dB (SNR 32 dB classified).
- Adjustable for optimal protection and fit. 3-point chin strap is included.

- CE-marking, approved according to:
- **CE** Regulation (EU) 2016/425
 - Industrial safety helmets: EN397:2012
 - Eye protection: EN166:2001
 - Hearing Protection: EN 352-3:2002



STRIPED AREAS ARE PROTECTED

SINGLE 2 000 BAR / 30 000 PSI ROTOR 3 000 BAR / 43 500 PSI

SIZES	ART. NO.
ONE SIZE (53–62 cm)	5102068 5000

PARTS THAT CAN BE ORDERED SEPARATELY

HELMET



ART. NO.

5102168 5000

HEARING PROTECTORS



ART. NO.

5105168 5000

VISOR HOLDER
NOTE! CAN ONLY BE ATTACHED TO TST'S HEARING PROTECTORS



ART. NO.

5103168 5000

VISOR
- PACK OF 10



ART. NO.

5104168 5000

CHIN STRAP



ART. NO.

5102190 5000

HELMET SUSPENSION



ART. NO.

5102490 5000



GLOVES 500 BAR

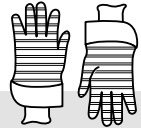
Approximately 90 % of the injuries in the industry occur on hands and feet. TST is the only company on the market offering protective gloves that are tested and approved. Our Gloves 500 bar in Dyneema[®], the world's strongest fiber, are specially made for waterjetting and environments where oil, water and dirt are common. The material and the rough, sand patterned surface dipped in nitrile rubber, make the gloves waterproof and provide the best possible grip. The large cuffs make the glove easy to take off which is important in the event of an accident.

Separate inner gloves in nylon increase comfort and useability. We recommend always using the inner glove as it will provide a better grip and be much more comfortable. Without it, the glove can be experienced as stiff and hard. The inner gloves are washable and are also sold separately so operators can have their personal inner gloves.

The gloves have been tested and classified with the highest test values. The level of performance is 4 out of 4 in abrasion, tear and puncture resistance, and level 5 out of 5 in blade cut resistance.

- Waterproof Gloves with protection up to 500 bar/7 500 psi.
- Available in two sizes: 9 (about S-M) and 11 (about L-XL).
- Separate inner gloves in nylon for optimal comfort and washability.
- Does not withstand high pressure hydraulic fluid.
- Supplied in 12-pack, including inner gloves. Shelf life up to 3 years.
- **CE** Regulation (EU) 2016/425
- Protective gloves from mechanical risks: EN ISO 388:2016

See test results on p. 75.



STRIPED AREAS ARE PROTECTED		
SINGLE 200 BAR / 3 000 PSI	ROTOR 500 BAR / 7 500 PSI	FLAT 500 BAR / 7 500 PSI

SIZES	ART. NO.
9, 11	5600025 5000






BOOTS 500 BAR


- Protective and waterproof.
- Made entirely of vulcanized rubber, the black parts of the boots are reinforced to withstand high pressure water jets.
- Designed for hours and hours of hard work. Textile inner lining for good comfort.
- Steel toecap and steel inserts to withstand sharp objects from underneath. The sole is designed for good grip.
- The boot shaft can be tightened with an adjustable strap.


CE-marking, approved according to:


- **CE** Regulation (EU) 2016/425
- Safety footwear: EN ISO 20345:2011

STRIPED AREAS ARE PROTECTED

 SINGLE
300 BAR / 4350 PSI

 ROTOR
500 BAR / 7500 PSI

 FLAT
500 BAR / 7500 PSI



SIZES	ART. NO.
EUR 36-48	5652025 5000

See shoe size conversion table on page 79



HOSE PROTECTION

- The lance is held near vital parts of the body, to protect from hose breaks which often occur near couplings and connections.
- Provides effective protection for the operator.
- Tested for 500 bar/7 500 psi. *See test results on p. 75.*
- An adjustable strap holds the Hose Protection securely in place.
- Very smooth and flexible.

HOSE PROTECTION Ø 41 MM/1.6 IN.		
LENGTH		ART. NO.
750 mm	2.5 ft	5660045 5920
1 400 mm	4.6 ft	5660045 5940

HOSE PROTECTION Ø 65 MM/2.6 IN.		
LENGTH		ART. NO.
750 mm	2.5 ft	5660063 5920



PROTECTION FOR WORKPLACES

WORKPLACE SAFETY SOLUTIONS



3 000 BAR / 43 500 PSI



1 400 BAR / 20 300 PSI

Workplace Safety Solutions is developed for when you need to protect sensitive equipment, machinery or people from water, water jetting, gravel spray and ricochets. The products are quick and easy to both

assemble and disassemble, transport and store. In this category we also have the Safety Funnel, which in a smooth way makes the work of cleaning heat exchangers safer.

MINIMIZE THE SAFETY AREA

Safety areas around high pressure water needs to be restrained. WSS products allow you to minimize this area to 1.5 m from the danger, for instance when repairing bridges, cars and people can pass just a few meters away. In marine and shipping environments, where confined spaces are common, WSS enables several operators to work closer together.



1,5 M SAFETY AREA

MADE IN DURABLE TECHSTEEL™

Our Workplace Safety Solution range is made of an extremely strong fabric called Techsteel™. The fabric is both dirt and water repellent, which makes the products easy to clean. The material is furthermore reinforced with Vectran® (LCP) for maximum strength and durability. The request for these qualities comes originally from the industry of concrete removal and demolition.

Durability: > 500 000 Martindale.



WATER REPELLENT



DIRT REPELLENT



VECTRAN®

PROTECTION LEVEL

The fabric in the WSS products have been tested to withstand:

- Waterjets up to 3 000 bar / 43 500 psi, 43 l/m, distance: 1.5 m
- Waterjets up to 1 100 bar / 16 000 psi, 100 l/m, distance: 2.3 m
- Waterjets up to 1400 bar/20 300 psi, 40/min, distance 75 mm
- Steel bullet 6 mm, 120 m/s
- Stone shot 360 g, 13 m/s

See test tables on page 78.



STEEL BULLET TESTED



STONE SHOT TESTED

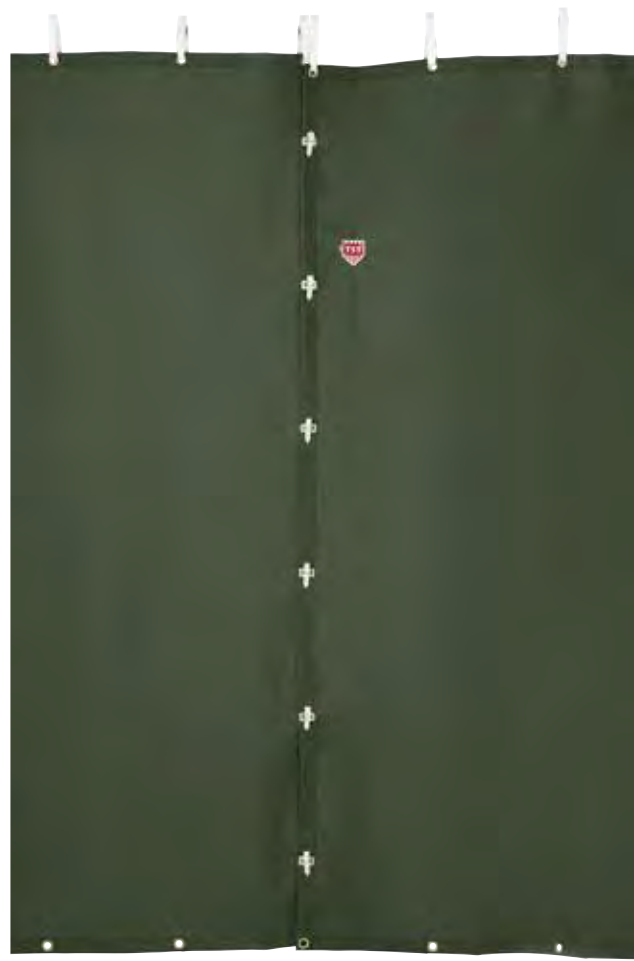
TIME SAVING AND FLEXIBLE

With the WSS products you can quickly create barriers, especially compared to wooden boards. Several Protective Curtains can easily be linked together to create a circle or form a protective wall of desired length.



CAN BE LINKED TOGETHER





PROTECTIVE CURTAIN

- Can be put together to form a protective wall of desired length. Each section is approx. 152x250 cm/5x8.2 ft and when put together they build 147 cm/4.8 ft per curtain.
- Straps on top for easy mounting and holes at the bottom for further securing.
- The sections are easy to connect with strong, easily handled locks.

See test results on p. 78.



 SINGLE 3 000 BAR / 43 500 PSI

SIZE		WEIGHT	ART. NO.
152 x 250 cm	5 x 8.2 ft	2.2 kg	5800010 5885



SAFETY FUNNEL

- Increases safety when cleaning heat exchangers.
- Prevents flying objects and water from hitting and injuring people and damaging equipment.
- Quick and easy application directly to the heat exchanger, instead of adding built protection of wooden boards, plates etc.
- Reduces the noise level.
- Easy to clean.
- The Ø 70 suits heat exchangers with approx. Ø 40–70 cm and the Ø 145 heat exchangers with approx. Ø 71-145 cm.

See test results on p. 78.

 TUBE CLEANING NOZZLE 1 400 BAR / 20300 PSI

SIZE		ART. NO.
Ø 70 cm / 27.5 inch		5830010 8070
Ø 145 cm / 57 inch		5830010 8145



SCUFF GUARD

- Protects valuable hoses from wear and tear.
- Dressed with an extremely durable Techsteel™ cover.
- The 2 m version is easy to mount as it is closed with hooks & loops.
- The 5 m version is like a tube. Inner diameter is approx. 57 mm for both versions.
- Both have eyelets for fastening at the ends.
- Can be pushed together so that a 5 m Scuff Guard fits with e.g. a 4 m hose.
- **No protection against pinhole leaks.**

LENGTH		ART. NO.	MOD. NO.
2 m	6.6 ft	5880060	5970
5 m	16.4 ft	5880050	5978

A man and a woman are standing on the deck of a ship. The man is wearing a bright orange high-visibility jacket with a small shield logo on the chest. The woman is wearing a grey and blue high-visibility jacket. They are both looking down. In the background, there are ship structures and a yellow lifebuoy with the word 'GÖTEBORGS' written on it. A dark grey banner with white diagonal lines is overlaid across the middle of the image, containing the text 'SAFETY AND TECHNICAL INFO' in white capital letters.

SAFETY AND TECHNICAL INFO

SAFETY FIRST

Is it really necessary to always use PPE (Personal Protective Equipment) when working with high pressure cleaning or waterjetting? Before you answer, read this.

Your eyes are at risk of damage already at a pressure of 7 bar/100 psi and above. Skin penetration may occur from 80 bar/1 160 psi. High pressure cleaning uses approximately 200 bar/2 900 psi. In waterjetting the pressure is 1 200 bar/17 400 psi or more, that's enough to cut through concrete! What it could do to the human body isn't hard to imagine. Unfortunately we have seen these effects. That is why our motto is "Saving Lives".

Waterjetting can be dangerous even if you do everything right. Accidents happen when you least expect them to. Hoses burst

and couplings break. Even the most experienced worker may slip. That's why you should never allow exemptions from wearing PPE even for jobs that "will only take a few minutes". If you are within an area of about 25 meters radius from high water pressure activities – regardless of it being performed by a colleague, a robot, or an automated solution – we highly recommend that you use PPE.

Employers have obligations concerning the provision and use of PPE at work. By using our products, you will contribute to a safer workplace where the workers safety and welfare is highly valued. Make sure that your employees get to go home to their loved ones, every day – and are fit for work again the next day.



All of our personal protective equipment is CE certified. TST Sweden are also certified in accordance with ISO 9001:2015 and ISO 14001:2015 – important tools for ensuring the quality of our products and our work to lay the foundation for positive environmental development.

Eyes risk damage
at **7 bar/ 100 psi**

Skin penetration
may occur from
80 bar/1 160 psi

TST Swedens PPE
withstands up to
3 000 bar/43 500 psi

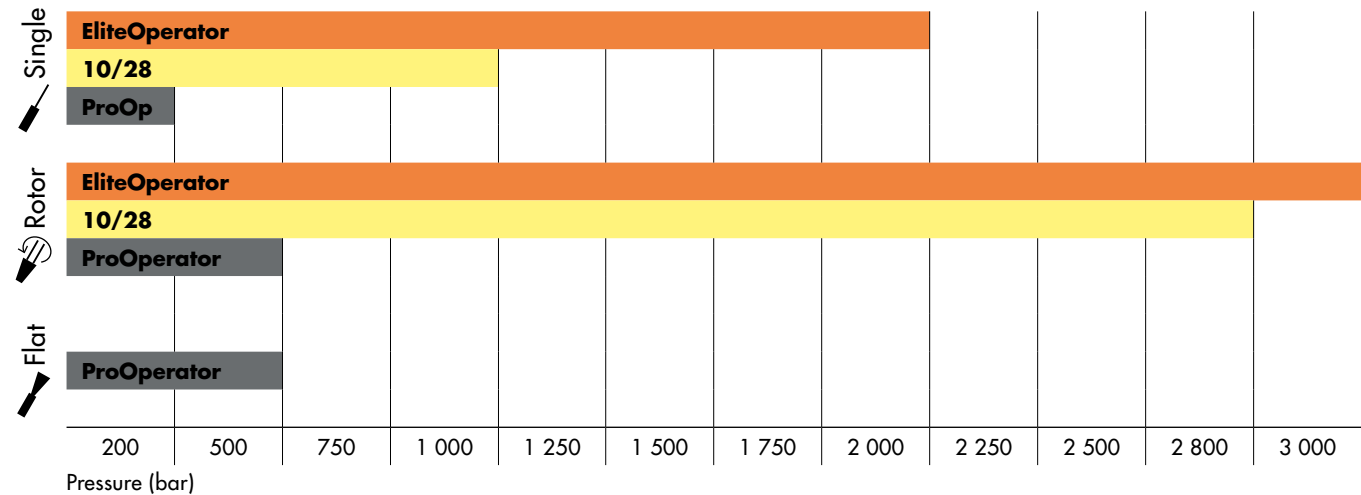
TEST RESULTS

TEST RESULTS - PROTECTION LEVELS

How to read the test results: There is no international standard for the testing of protection levels. Therefore the testing can differ significantly between companies. For this reason it is crucial to be aware of the differences and how and what to properly compare. A protection level of eg. 3 000 bar can mean different things, depending on the pressure, flow, nozzle, distance or speed used while testing. To verify the protective

qualities we have chosen the most common working conditions when performing our tests of notified body. Most nozzles perform at their best between 50 and 100 mm, therefore we have chosen the distance of 75 mm. Rotating tests have been performed with two nozzles (adding more nozzles result in a lower overall impact). On this and the next spread, you can read how our products are tested.

GUIDE - PROTECTION LEVELS PPE



PROTECTIVE CLOTHING

Product category	Pressure		Flow		Nozzle				RPM Revolutions per minute	Distance		Linear speed		Result
	Bar	Psi	Litre/minute	Gallon/minute	Type	Quantity	Diameter mm	Diameter in		mm	in	m/s	in/sec	
EliteOperator	2 000	30 000	17.9	4.7	Single	1	0.8	0.031	-	75	3	0.5	20	No penetration
EliteOperator	3 000	43 500	19.5	5.2	Rotor	2	0.6	0.024	3 000	75	3	0.5	20	No penetration
10/28	1 000	15 000	19.8	5.2	Single	1	1.0	0.039	-	75	3	0.5	20	No penetration
10/28	2 800	40 000	18.8	5.0	Rotor	2	0.6	0.024	3 000	75	3	0.5	20	No penetration
ProOperator	200	3 000	10.7	2.8	Single	1	1.1	0.04	-	75	3	0.5	20	No penetration
ProOperator	500	7 500	16.9	4.5	Rotor	1	1.1	0.04	N/A	75	3	0.5	20	No penetration
ProOperator	500	7 500	16.9	4.5	Flat	1	1.1	0.04	-	75	3	0.5	20	No penetration

Note! Different values, eg. pressure, flow, nozzle, distance or speed, can give significantly different results!

OVERVIEW – PROTECTION LEVELS CLOTHING

Product category	Single		Rotor		Flat	
	Bar	Psi	Bar	Psi	Bar	Psi
EliteOperator	2 000	30 000	3 000	43 500	-	-
10/28	1 000	15 000	2 800	40 000	-	-
ProOperator	200	3 000	500	7 500	500	7 500

HEAD PROTECTION 3000 BAR

Pressure		Flow		Nozzle				RPM	Distance		Linear speed		Result
Bar	Psi	Litre/minute	Gallon/minute	Type	Quantity	Diameter mm	Diameter in		mm	in	m/s	in/sec	
2 000	30 000	17.9	4.7	Single	1	0.8	0.031	-	75	3	0.5	20	No penetration
3 000	43 500	19.5	5.2	Rotor	2	0.6	0.024	3 000	75	3	0.5	20	No penetration

BOOTS 3000 BAR

Pressure		Flow		Nozzle				Distance		Linear speed		Thrust		Result
Bar	Psi	Litre/minute	Gallon/minute	Type	Quantity	Diameter mm	Diameter in	mm	in	m/s	in/sec	N	lbs	
1 700	25 000	20.0	5.3	Single	1	1.0	0.039	75	3	0.2	7.9	250	56	No penetration
2 500	36 000	19.0	5.0	Monro-Jet	1	0.8	0.031	75	3	0.2	7.9	227	51	No penetration
3 000	43 500	19.0	5.0	Rotor	3	0.5	0.020	75	3	0.2	7.9	243	55	No penetration
3 000	43 500	16.2	4.3	Single	1	0.8	0.031	75	3	0.2	7.9	207	47	No penetration

PROOPERATOR – HYDRAULIC FLUID

ProOperator is tested for high pressure hydraulic fluid according to the table below. The smallest Sapphire nozzle, only 0.15 mm, has been used to simulate a so called pin burst. Please note that *Gloves 500 bar* and *ProOperator Boots* are not tested for hydraulic fluid. **Note! Different values, eg. pressure, flow, burst size, distance or speed, can give significantly different results!**

Pressure		Nozzle				Distance		Linear speed		Break through time
Bar	Psi	Type	Quantity	Diameter mm	Diameter in.	mm	in	m/s	in/sec	
250	3 750	Single	1	0.15	0.006	5	0.2	0	0	> 60 s
350	5 100	Single	1	0.15	0.006	5	0.2	0	0	35 s
500	7 500	Single	1	0.15	0.006	5	0.2	0	0	4 s

HOSE PROTECTION

Product	Diameter		Burst test			Pinhole leak test	
	mm	inch	Bar	Psi	Result	Tested	Result
Hose Protection 3000	36, 47, 59	1.42, 1.85, 2.32	3 000	43 500	No penetration	Yes	No penetration
Hose Connection Cover	61	2.40	3 000	43 500	No penetration	No	-
Hose Protection ProOperator	41	1.61	1 800	26 100	No penetration	No	-
Whip Stop	-	-	-	-	30 kN	-	-

WORKPLACE SAFETY SOLUTIONS

HIGH PRESSURE WATER JET TEST

Test is relevant for	Pressure		Flow		Nozzle	Newton	Distance		Result
	Bar	Psi	Litre/minute	Gallon/minute					
Curtain	1 100	16 000	100	26.4	Single	740	2.3 m	7.5 ft	No penetration
Curtain	3 000	43 500	43	11.4	Single	550	1.5 m	5 ft	No penetration
Funnel	1 400	20 300	40	10.5	Tube nozzle	350	75 mm	3 in.	No penetration

PROJECTILE TEST

Projectile	Linear speed		Number of textile layers	Result	ISO Standard
	m/s	ft/sec			
Steel bullet, 6 mm	120	393.7	1	No penetration	EN ISO 168
Stone shot, 360 g	13	42.7	1	No penetration	EN ISO 1794-1

TECHNICAL DESCRIPTION

ELITEOPERATOR
Outer material: DWR (Durable Water Repellent) treated Techsteel™. **Inner material:** Polyester mesh. **Protective material:** Special fabric containing Dyneema® fiber. Seams are taped. **CE-marking:** Approved according to the Regulation (EU) 2016/425.

HEAD PROTECTION 3000 BAR
Helmet is made of fiberglass reinforced polyamide. Temperature range -30° to +150°. Recommended life span 3–5 years. **CE-marking:** Approved according to Industrial safety helmets: EN397:2012. Eye protection: EN166:2001. Hearing Protection: EN 352-3:2002 and Regulation (EU) 2016/425.

10/28
Outer material: DWR (Durable Water Repellent) treated polyamide. **Inner material:** Polyester mesh. **Protective material:** Special fabric containing Dyneema® fiber. Seams are taped. **CE-marking:** Approved according to the Regulation (EU) 2016/425.

PROOPERATOR
Outer material: DWR (Durable Water Repellent) treated polyamide. **Inner material:** Polyester mesh. **Protective material:** Special fabric containing Dyneema® fiber. Seams are taped. **CE-marking:** Approved according to the directive Regulation (EU) 2016/425.

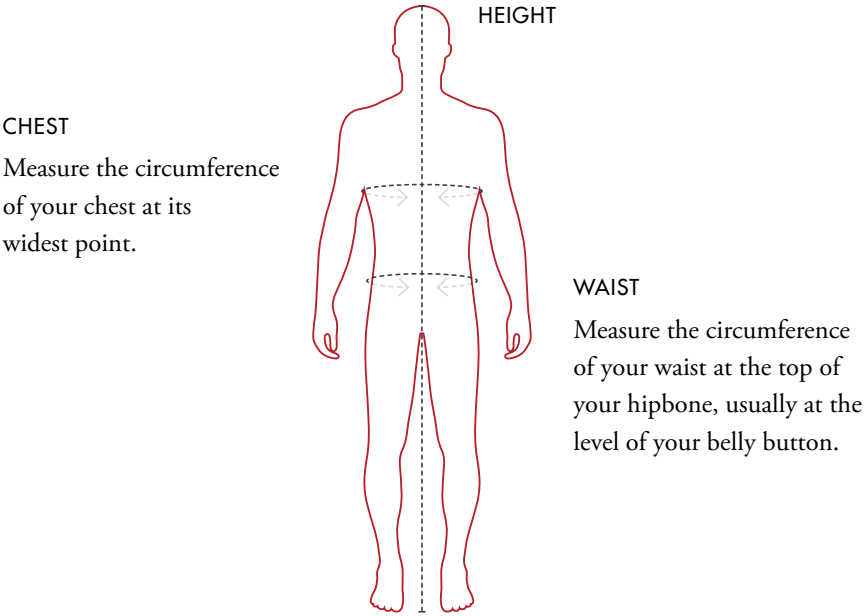
WORKPLACE SAFETY SOLUTIONS
Material: DWR (Durable Water Repellent) treated Techsteel™.

MARTINDALE ABRASION TEST

The Martindale abrasion test simulates natural wear of a textile, in which the textile sample is rubbed against a standard abrasive surface with a specified force. Domestic cotton fabrics often have a rating of 20 000 rubs and polyester fabrics have 30 000.

The Techsteel™ glossy fabric in EliteOperator and Workplace Safety Solutions has over 500 000. The outer fabric in 10/28 and ProOperator has a rating of 300 000. The method for Martindale test is EN ISO 12947-1:1998.

SIZING TABLES



SINGLE SIZES

Sizes (Mens)	Height		Chest		Waist	
	cm	ft and inch	cm	inch	cm	inch
XS	168 – 180	5' 6" – 5' 11"	84 – 88	33 – 35	72 – 76	28 – 30
S	168 – 184	5' 6" – 6' ½"	92 – 96	36 – 38	80 – 84	31 – 33
M	168 – 184	5' 6" – 6' ½"	98 – 104	39 – 41	88 – 92	34 – 37
L	176 – 192	5' 9" – 6' 4"	108 – 112	42 – 44	97 – 102	38 – 41
XL	176 – 192	5' 9" – 6' 4"	116 – 120	45 – 48	108 – 114	42 – 45
2XL	187 – 206	6' 2" – 6' 9"	124 – 128	49 – 51	120 – 126	47 – 50
3XL	187 – 206	6' 2" – 6' 9"	132 – 136	52 – 54	132 – 138	52 – 55

DOUBLE SIZES

Sizes (Mens)	Height		Chest		Waist	
	cm	ft and inch	cm	inch	cm	inch
S/M	168 – 184	5' 6" – 6' ½"	92 – 104	36 – 41	80 – 92	31 – 37
L/XL	176 – 192	5' 9" – 6' 4"	108 – 120	42 – 48	97 – 114	38 – 45
2XL/3XL	187 – 206	6' 2" – 6' 9"	124 – 136	49 – 54	120 – 138	47 – 55
4XL/5XL	187 – 206	6' 2" – 6' 9"	140 – 152	55 – 60	144 – 162	56 – 64

BOOTS 3000 BAR SHOE SIZE GUIDE

EUR	US	UK
42	9	9
43	9 ½	9 ½
44	10	10
45	10 ½	10 ½
46	11	11
47	12	12
48	13	13

GAITERS SHOE SIZE GUIDE

EUR	US	UK
36 – 41	4 – 8	4 – 8
42 – 48	9 – 13	9 – 13
49 – 52	14 – 16	14 – 16

BOOTS 500 BAR SHOE SIZE GUIDE

EUR	US	UK
36	4	3
37	5	4
38	5 ½	4 ½
39	6 ½	5 ½
40	7 ½	6 ½
41	8 ½	7 ½
42	9	8
43	10	9 ½
44	10 ½	10
45	11 ½	10 ½
46	12	11
47	13	12
48	14	13



VENTILATION & COOLING



A FRESH BREEZE
INSIDE YOUR CLOTHING



COOLING VESTS

Effectively and gently cooling the body.
Our Cooling Vest helps operators perform at their best for a longer period. The technology is unique and based on special energy Temptech® elements. The elements absorb heat from the body, providing an effective and gentle cooling for 90 minutes in 60 °C and four hours in 45 °C. The elements recharge without an external energy source: 2–3 hours in 22 °C, 30 minutes in 8 °C and just 5–10 minutes in a freezer or in iced water.

Visit tst-sweden.com for more information.



VENTILATION

We have taken comfort to the next level with the option to add ventilation in our EliteOperator and 10/28 Trousers and Overall. This solution allows compressed air to flow through the clothing, cooling the operator during the entire work shift.

To make maximum use of the ventilation a continued airflow of 250–400 l/minute (9–14 CFM) at 7 bar is required. Also, smaller compressors can be used if there is a possibility to regulate the airflow.

	ART. NO.
Trousers	5198000 5030
Overall	5198000 5040



ULTRA

- 21 energy elements in size L/2XL.
- 17 energy elements in size XS/M.
- Transfer up to 40 times more moisture than standard polyester.
- Extensions and elastics for a perfect fit.

SIZES	ART. NO.
XS/M	3050P28 3815
L/2XL	3050P28 3810



MULTI

- 20 energy elements.
- Closes with hooks & loops.
- Also available in a flame retardant material.

SIZES	ART. NO.
S/M–4XL/5XL	3010P28 3000

BEST
SELLER



FLEXI

- 16 energy elements.
- Also available in fire-resistant Nomex material.

SIZES	ART. NO.
ONESIZE	3000P28 3000

CLEAN & CARE

CLEAN AND CARE INSTRUCTIONS

Our clothes can be hand cleaned with a brush and TST Grease Remover or a soap solution. Rinse with clean water. Allow to dry on a hanger in a well ventilated area.

Store the garments dry and out of direct sunlight. Zippers and hooks & loops are sensitive to dirt and should always be kept clean.

To extend the lifespan of the garments, we recommend rain and/or chemical protection on the outside of the garments in exposed environments. If garments are exposed to chemicals; rinse directly with clean water.



HAND CLEAN



DO NOT BLEACH



DO NOT TUMBLE DRY



DO NOT IRON



DO NOT DRYCLEAN



TST GREASE REMOVER

- Grease Remover, specially formulated for TST clothing.
- Mixed with warm water 1:10 and applied to the soiled garment with a brush.

SIZES	ART. NO.
0.5 litre	5092000 5010
2.5 litre	5092000 5020

SAVING LIVES THROUGH SUSTAINABILITY

Our promise to our customers and their families is to save lives. With this promise, striving for a sustainable future is a priority for us, and we continuously work to make the world a little safer and a little better to live in.

UN global goals

In 2015, the United Nations adopted 17 sustainable development goals to be reached by 2030. We are committed to play our part. Some of the goals are particularly relevant to us: Protect labour rights and promote safe working environments, Clean water & sanitation and Responsible consumption & production.

Sustainability by being the best

We pride ourselves with being the best in the industry and we work hard to find new techniques and materials to make our products safer, more comfortable to wear and more sustainable to produce. We participate in a variety of networks to share our knowledge of technical textiles.

Local manufacturing

We manufacture most of our products in Sweden and Latvia, and ensure our factories have fair working conditions and a responsible water management. The short distance between us and our manufacturers reduces unnecessary transports.

Certifications

All our PPE products are CE certified in accordance with the PPE Regulation; the European legislation for Personal Protective Equipment. TST Sweden is certified according to ISO 14001 environmental management and ISO 9001 for quality management. We work systematically to improve our products and reduce our climate impact.

Limiting our chemical footprint

We follow the REACH regulation which concerns the registration, evaluation, authorization, and restriction of chemical substances. And also constantly strive to reduce our use of chemicals, always opting for better ones.

Safety academy

Through our promise, "Saving Lives", we are committed to ensure that our customers come home to their family and loved ones every day. Therefore educating the world about using correct protection is a task we take very seriously. Our ambition is to spread knowledge to employers and workers all around the world.

Every little thing helps

Whether it's drinking organic fairtrade coffee at the office or driving electric company cars, planting trees or supporting children with cancer, each employee at TST do what they can to make the world a little bit better!



THE DIFFERENCE IS IN THE DETAILS

We founded our company in the region of Sjuhäradsbygden, in the south-west of Sweden, and we are still working from here today. Sjuhäradsbygden has been the home of textiles production for over a century – and still is today. Several of Sweden's biggest fashion and textiles companies are based in the region. There are many benefits of being here. Invaluable experience and sound knowledge of the textiles industry converge here in a single place. What's more, the collaboration between companies is also excellent. If you work with products

that are designed to save lives, you don't want to leave anything to chance. We use local suppliers that we know well, and we work with RISE Research Institutes of Sweden and the Swedish School of Textiles in Borås. We develop our products ourselves and production is local, which allows us to better control the entire chain. All of this helps us to be innovative and at the forefront of development, which in turn ensures that we can uphold the highest of standards and offer the best functionality – down to the smallest detail.



OUR VALUES

Through our actions and our products we shall instill a high level of confidence in our customers, suppliers and business partners.

By continuously developing our products and working on innovative new solutions, we will bring products to the market that are of the highest class. Collaborations with universities and suppliers at the forefront of textile materials and treatments are a matter of course for us.

In our internal and external relationships, we shall be considered a long-term partner. Our products shall be developed and marketed with a long-term profile, where we want to see customers and suppliers staying with us year after year.

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SAVING LIVES

TST Sweden AB

Segloravägen 22, 504 64 Borås, Sweden
info@tst-sweden.se | tst-sweden.com

TST SWEDEN DISTRIBUTOR INFORMATION: